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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,432	03/01/2002	Sung-Fei Wang	U 013887-9	3547
7590	08/25/2004		EXAMINER MITCHELL, JAMES M	
Ladas & Parry 26 West 61st Street New York, NY 10023			ART UNIT 2813	PAPER NUMBER

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,432

Applicant(s)

WANG ET AL.

Examiner

James M. Mitchell

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5 and 11 is/are rejected.
- 7) ☒ Claim(s) 6-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 7 is objected to because of the following informalities: the word "corresp0onding" [sic] has a typographical error. Appropriate correction is required. Please review application in its entirety for any additional typographical or grammatical errors.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 5 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamei et al. (U.S. 2001/0008306)

Kamei (Fig 1, 2) discloses (cl. 5) a stacked semiconductor chip package comprising: a substrate (72,73,13) having a top surface, a first chip (3) on the top surface of the substrate and electrically connected to the substrate (Par 0032; wiring on substrate), a second chip (4) disposed above the first chip and electrically connected to the substrate (Par .0032) and having two opposed longitudinal sides defining a first length (Fig 2); and a plate (61) between the first chip

and the second chip, connected (i.e. underfill not labeled on first chip and adhesive, 27) to the first chip and the second chip, and having two opposed longitudinal sides corresponding to the two longitudinal sides of the second chip, the plate defining a second length, the second length being larger than the first length (i.e. plate is larger than chip) to expose the opposed longitudinal sides of the plate and to expose a adhesive layer formed between the plate and the second chip (sides and adhesive shown exposed in Fig 1) wherein the portion of the plate under the second chip is enclosed (i.e. adhesive covers 2 vertical sides and top horizontal portion) with an adhesive/underfill and therefore is wrapped in the adhesive layer and the adhesive layer is exposed at the corner formed by the plate and second chip along the longitudinal side of the plate (Fig 1; shows exposed adhesive/underfill along sides of plate and chip); (cl. 11) further discloses said first chip on the substrate and electrically connected to the substrate by a plurality of electrical leads (19), and said second chip electrically connected to the substrate by a plurality of electrical leads (24).

Response to Arguments

Applicant's arguments that examiner addressed wrong claims and that the prior art did not show the plate wrapped in an adhesive has been considered and is found persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection has been made in view of Kamei et al. (U.S. 2001/0008306), *supra*.

Allowable Subject Matter

Claims 6-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not disclose or make obvious a plate between a first and second chip, wrapped in an adhesive such that a portion of the adhesive is also between the chip and plate and the plate has a longitudinal length greater than the second chip and the third chip has a longitudinal length greater than the longitudinal length of the plate or that the width of the plate is smaller than that of the second chip including all the limitation of the independent claim.


Although stacked arrangement of chips and plates that decrease in length from its lower to top component are known as shown in Maeda (JP 3-109760; Fig 1, 2), the present invention is distinguishable in that the plate is not wrapped in an adhesive, whereby more than one surface of the plate is covered with a continuous layer of adhesive and therefore enclosed in an adhesive as shown in applicant's Figure 2. The prior art merely discloses an adhesive on a single surface of a plate and not wrapped in an adhesive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Mitchell whose telephone number is (571) 272-1931. The examiner can normally be reached on M-F 10:30-8:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jmm
August 18, 2004



CARL WHITEHEAD, JR.
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TECHNOLOGY CENTER 2800